INFORMATION
IC-7610 Version 1.30

The following features are now changed in, or added to, the IC-7610.

`Added` : New functions and/or menus have been added.
`Changed` : Some operations, items, and/or options that already exist have been changed.
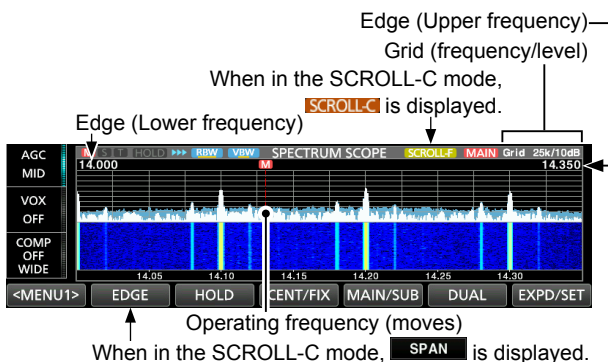
`Changed` Scope operation

- The Scroll mode is added.
- When the scope span or Edge frequency is changed, such as by touching [SPAN] or [EDGE], the selected scope span or the selected Edge frequency display is enlarged.
- In the SCOPE SET menu, "Marker Position (FIX Type)" is renamed to "Marker Position (FIX Type/SCROLL Type)."
- The maximum number of Fixed Edges for each band is increased from 3 to 4.
- Each band memorizes the Reference level.
- When the Scope screen is open, holding down [M.SCOPE] for 1 second closes the screen.

◇ Scroll mode

Displays signals within a selected span. When the operating frequency moves outside of the screen, the displayed frequency range is automatically scrolled.

1. Display the SPECTRUM SCOPE screen.
   `MENU` » `SCOPE`

2. Touch [CENT/FIX] for 1 second to select the Scroll mode.
   - When changing the Center mode to the Scroll mode, "SCROLL-C" is displayed.
     You can change the scope span by touching [SPAN].
   - When changing the Fixed mode to the Scroll mode, "SCROLL-F" is displayed.
     You can change the Edge frequencies by touching [EDGE].

3. Touch [CENT/FIX] to return to the previous mode.
   - When returning to the Center mode, the scope span does not return to the previous setting.
   - When returning to the Fixed mode, the Edge frequencies return to the last selected "Fixed Edges." If the operating frequency is above the upper Edge frequency, or below the lower Edge frequency, ">>" or "<<" is displayed in the upper side corners of the SPECTRUM SCOPE screen

Edge (Upper frequency)
Grid (frequency/level)
When in the SCROLL-C mode, `SCROLL-C` is displayed.
Edge (Lower frequency)

Operating frequency (moves)
When in the SCROLL-C mode, `SPAN` is displayed.

`Changed` Tone Control settings in the Data mode

In the Data mode, the Tone Control settings are automatically disabled.

`MENU` » SET > Tone Control/TBW > **RX**

- RX HPF/LPF (Default: – – – – – – –)
- RX Bass (Default: 0)
- RX Treble (Default: 0)

`Changed` REF Adjust

"REF Adjust" in the Set mode is displayed to the tenths place digit.

`MENU` » SET > Function > **REF Adjust**

`Changed` Keyboard entry

On the Full Keyboard screen, the Capital Lock function is not canceled, even if you toggle between the alphabet and numeric modes.

Changed CI-V commands

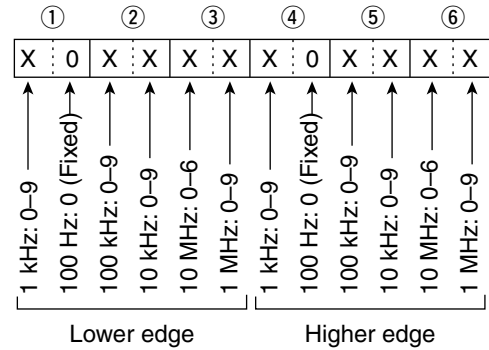The following commands are changed in, or added to the conventional Command table.

Cmd.	Sub cmd.	Data	Description
1A*	05	0169	00 or 01	SCOPE SET > Marker Position (FIX Type/SCROLL Type) (00=Filter center, 01 Carrier point)
		0298	See the right.	SCOPE > Fixed Edges > 0.03 – 1.60 No.4
		0299	See the right.	SCOPE > Fixed Edges > 1.60 – 2.00 No.4
		0300	See the right.	SCOPE > Fixed Edges > 2.00 – 6.00 No.4
		0301	See the right.	SCOPE > Fixed Edges > 6.00 – 8.00 No.4
		0302	See the right.	SCOPE > Fixed Edges > 8.00 – 11.00 No.4
		0303	See the right.	SCOPE > Fixed Edges > 11.00 – 15.00 No.4
		0304	See the right.	SCOPE > Fixed Edges > 15.00 – 20.00 No.4
		0305	See the right.	SCOPE > Fixed Edges > 20.00 – 22.00 No.4
		0306	See the right.	SCOPE > Fixed Edges > 22.00 – 26.00 No.4
		0307	See the right.	SCOPE > Fixed Edges > 26.00 – 30.00 No.4
		0308	See the right.	SCOPE > Fixed Edges > 30.00 – 45.00 No.4
		0309	See the right.	SCOPE > Fixed Edges > 45.00 – 60.00 No.4
27*	00		See p. 3.	Read the Scope waveform data • Only when "Scope ON/OFF status" (Command: 27 10) and "Scope data output" (Command: 27 11) are set to "ON," outputs the waveform data to the controller.
	14		See p. 3.	Scope Center mode, Fixed mode, SCROLL-C mode, or SCROLL-F mode setting
	15		See p. 3.	Span setting in the Center mode or SCROLL-C mode Scope
	16		See p. 4.	Edge number setting in the Fixed mode or SCROLL-F mode Scope
	20		00 or 01	SCOPE SET > Marker Position (FIX Type/SCROLL Type) (00=Filter Center, 01=Carrier Point)

*(Asterisk) Send/read data

◇ **Command formats**
• **Bandscope edge frequency settings**
Command: 1A 05 0182 ~ 1A 05 0217
         1A 05 0298 ~ 1A 05 0309

①		②		③		④		⑤		⑥	
X	0	X	X	X	X	X	0	X	X	X	X

1 kHz: 0–9
100 Hz: 0 (Fixed)
100 kHz: 0–9
10 kHz: 0–9
10 MHz: 0–6
1 MHz: 0–9
1 kHz: 0–9
100 Hz: 0 (Fixed)
100 kHz: 0–9
10 kHz: 0–9
10 MHz: 0–6
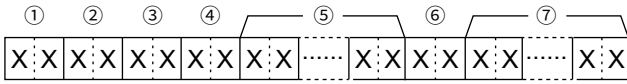1 MHz: 0–9

Lower edge   Higher edge

Changed CI-V commands

◇ Command formats (continued)

• Scope waveform data
Command: 27 00

Outputs the waveform data to the controller.

①: Main or Sub scope data
   • 00 = Main scope
   • 01 = Sub scope

②: Order of division data (Current)

③: Division number (01 or 15)
   When data is sent to the controller through the LAN port, all data is sent together. However, when the data is sent through the USB port, the data is divided by 15 and sent in sequential order.

	Division number	Data length	
LAN	01	704	
USB	15	1st data	15
		2nd or later data	53
		15th data	42

The 1st data sends only the wave information (① ~ ⑥) without the waveform data (⑦).

The 2nd or later data sends the minimum wave information (① ~ ③) with waveform data (⑦).

④: Spectrum scope mode data:
   • 00 = Center mode scope
   • 01 = Fixed mode scope
   • 02 = SCROLL-C mode scope
   • 03 = SCROLL-F mode scope

⑤: Waveform information:
   The waveform information differs, depending on the Spectrum scope mode.
   • In the Center mode:
     Center frequency and span are sent.
     See page 10 of the IC-7610 CI-V REFERENCE GUIDE for Operating frequency data and the Scope span settings (② ~ ⑥) to the right.
   • In the Fixed, SCROLL-C, and SCROLL-F modes:
     Lower edge and higher edge frequencies are sent.
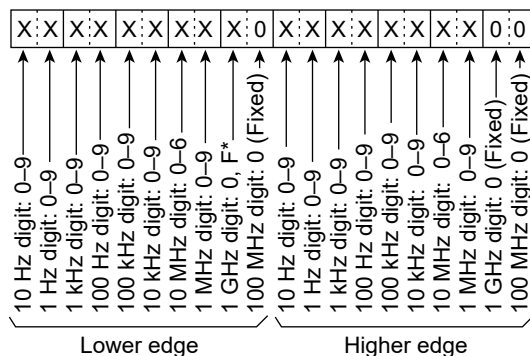
Lower edge   Higher edge

* "F" means that the Lower edge frequency is a negative value.

⑥: Out of range information:
   • 00 = In range
   • 01 = Out of range
   ⓘ If the scope data is out of range, the waveform data (⑦) is omitted.
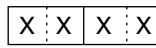
⑦: Waveform data:
   The transceiver outputs the drawn waveform data. The data range or data length of the waveform data is judged by the controller. (The data range is basically the same as the display size of the scope on the controller.)
   • Data range: 0 ~ 200
   • Data length: 689

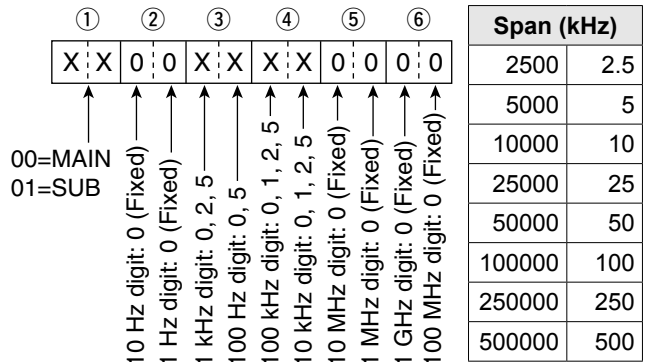### • Spectrum scope mode settings
Command: 27 14

00=MAIN   00=Center mode
01=SUB   01=Fixed mode
             02=SCROLL-C mode
             03=SCROLL-F mode

• Scope span settings
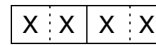(in the Center mode and SCROLL-C mode scope)
Command: 27 15

Span (kHz)	
2500	2.5
5000	5
10000	10
25000	25
50000	50
100000	100
250000	250
500000	500

• Scope Fixed edge number settings
(in the Fixed mode and SCROLL-F mode scope)
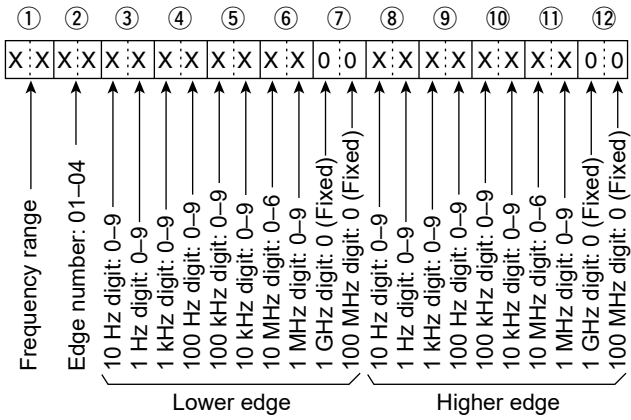Command: 27 16

00=MAIN   01=Edge 1
01=SUB   02=Edge 2
             03=Edge 3
             04=Edge 4

Changed CI-V commands

◇ Command formats (continued)

• **Scope Fixed edge frequency settings**
Command: 27 1E

ⓘEntry of less than 1 kHz digits is ignored.

① Selectable Frequency ranges:

Data	Frequency range (MHz)
01	0.03 ~ 1.60
02	1.60 ~ 2.00
03	2.00 ~ 6.00
04	6.00 ~ 8.00
05	8.00 ~ 11.00
06	11.00 ~ 15.00
07	15.00 ~ 20.00
08	20.00 ~ 22.00
09	22.00 ~ 26.00
10	26.00 ~ 30.00
11	30.00 ~ 45.00
12	45.00 ~ 60.00

② Selectable Edge number: 01=1, 02=2, 03=3, 04=4

INFORMATION
IC-7610 Version 1.10

The following features are now changed in, or added to, the IC-7610.

`Added` : New functions and/or menus have been added.
`Changed` : Some operations, items, and/or options that already exist have been changed.

`Changed` Selecting the IF filter (p. 4-4)

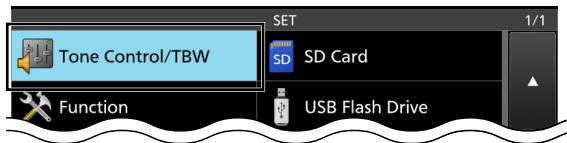The default settings of the SSB-D mode (FIL1 ~ FIL3) are changed.
The changed items are shown in bold in the table below.

Mode	IF filter	Selectable range (steps)
SSB-D	FIL 1 (**3.0 kHz**)	50 Hz to 500 Hz (50 Hz)/ 600 Hz to 3.6 kHz (100 Hz)
	FIL 1 (**1.2 kHz**)	
	FIL 1 (**500 Hz**)	

`Changed` Set mode description (p. 8-1)

`MENU` » `SET > Tone Control`

Menu category name "Tone Control" is changed to "Tone Control/TBW."

① Please read item "Tone Control" in the manual as "Tone Control/TBW."

`Added` TBW for the SSB-D mode (p. 8-2)

`MENU` » `SET > Tone Control/TBW > TX > SSB-D`

A passband width setting item for the SSB-D mode is added.

TBW (Default: 300 – 2700)

Set the transmission pass bandwidth by changing the lower and upper cut-off frequencies.

`Added` New CI-V commands (CI-V Reference guide)

Refer to the CI-V reference guide for the added CI-V commands.
The reference guide can be downloaded from the Icom web site.
• Command 29: Select the Main or Sub band.
• Command 1A 05 0296: Send/read the SSB-D TX bandwidth
• Command 1A 05 0297: Send/read the inhibit timer for the USB cable connection
• Command 1A 0A: Read the OVF indicator status

`Added` Inhibit Timer at USB Connection (p. 8-6)

`MENU` » `SET > Connectors > USB SEND/Keying`

An inhibit timer for the USB cable connection is added.

Inhibit Timer at USB Connection (Default: ON)

Turn ON the timer to prevent unintentional SEND or Keying signal transmission if the USB driver version is not the latest one, under the following conditions.
• When connecting a PC to the IC-7610 using a USB cable.
• When a virtual serial port communication has been established.
• While the IC-7610 and a PC are connected using a USB cable, or when starting up the PC or connecting or disconnecting a USB device to or from the PC.

OFF: The IC-7610 transmits the SEND or Keying signal right after a PC or USB device is connected.
ON: The IC-7610 transmits after a few seconds have passed to prevent unintentional transmission.
① If you change this setting to "OFF," update the transceiver's USB driver and make sure the SEND or Keying signal will not be unintentionally transmitted.

`Added` Save Form for SD Card / USB Flash Drive (p. 8-9) / (p. 8-10)

`MENU` » `SET > SD Card/USB Flash Drive`

A save file format selecting item is added.

Save Form (Default: Now Ver)

Selects the format to save the settings to an SD card.

Now Ver: Saves the settings in the current version format.
Old Ver (x.xx - x.xx): Saves the settings in the older version format indicated in the parenthesis (x.xx = version).
① If you select "Old Ver (x.xx - x.xx)," a function that is added when the transceiver's firmware format is updated will not be saved.
① You cannot load a setting file that is saved in the current version format to an earlier firmware version.